

*Handwritten signature*

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/751,135	PATEL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hai L. Nguyen	2816	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 5/26/2005.
2. ☒ The allowed claim(s) is/are 1-18 and 20-28.
3. ☒ The drawings filed on 26 May 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| <ol style="list-style-type: none"><li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li><li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li><li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date <u>26 May 2005</u></li><li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li></ol> | <ol style="list-style-type: none"><li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li><li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li><li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li><li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li><li>9. <input type="checkbox"/> Other _____.</li></ol> |
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## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment received on 5/26/2005 has been reviewed and considered with the following results:

As to the objection to the drawings, Applicant's revision of the drawings has overcome the objection, as such; the objection has been withdrawn.

As to the rejections to claims 17-19, under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, Applicant's amendments have overcome the rejections, as such; the rejections have been withdrawn.

As to the prior art rejections to the claims, Applicant's arguments with respect to the prior art rejections mailed on 2/24/2004 have been fully considered and found persuasive, as such; the prior art rejections have been withdrawn. Since the amended claims now read over cited prior art of record, the case is found to be in allowance condition.

## **REASON FOR ALLOWANCE**

2. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to disclose or fairly suggest a circuit (400 in instant Fig. 4), and a method of use thereof, as recited in claims 1 and 23, having specific structural limitations such as multiple interpolator blocks (408, which is also shown in detailed as 500-530 in instant Fig. 5), operably coupled to the delay chain (406), wherein consecutive ones of the multiple interpolator blocks are capable of receiving and interpolating between consecutive ones of the multiple delayed signals (430) to produce an interpolated version (423) of the input signal (428), wherein the interpolated version is delayed to one of multiple, intermediate delay values that are

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separated by a second phase increment that is smaller than the first phase increment; and a current source select signal generator circuit (800 in instant Fig. 8), operably coupled to the multiple interpolator blocks, which includes a split current source (804, 806), and which is capable of providing variable current source select signals to the multiple interpolator blocks to control interpolation between the consecutive ones of the multiple delayed signals; and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

Claims 2, 4, 7, 12, 13, 15, 16, 20, 21, and 25 are allowed for similar reasons; note the above discussion with regard to claims 1 and 23.

The prior art of record fails to disclose or fairly suggest a circuit (400 in instant Fig. 4), as recited in claim 26, having specific structural limitations such as multiple interpolator blocks (408, which is also shown in detailed as 500-530 in instant Fig. 5), operably coupled to the delay chain (406), wherein consecutive ones of the multiple interpolator blocks are capable of receiving and interpolating between consecutive ones of the multiple delayed signals (430) to produce an interpolated version (423) of the input signal (428), wherein the interpolated version is delayed to one of multiple, intermediate delay values that are separated by a second phase increment that is smaller than the first phase increment; and a signal generator circuit (800 in instant Fig. 8), operably coupled to the multiple interpolator blocks, to provide variable signals (PBIASs, PHSEL 0 - PHSEL 12) to the multiple interpolator blocks to control interpolation between the consecutive ones of the multiple delayed signals.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


***Conclusion***


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747 and Right Fax number is 571-273-1747. The examiner can normally be reached on Monday-Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The official fax phone number for the organization where this application or proceeding is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1562.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HLN   
June 8, 2005

  
Kenneth B. Wells  
Primary Examiner